

General

Title

Occupational health: estimated annual incidence rate of all musculoskeletal disorders (MSDs) involving days away from work per 100,000 full-time equivalents (FTEs).

Source(s)

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

Measure Domain

Primary Measure Domain

Related Population Health Measures: Population Health State

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the estimated annual incidence rate of all musculoskeletal disorders (MSDs) involving days away from work per 100,000 full-time equivalents (FTEs) in the private industry sector.

Rationale

State health agencies, which are vested with the legal authority to require disease reporting and collect health data, play a central role in public health surveillance. Whereas public health surveillance was once focused primarily on infectious diseases, it has expanded in recent years to include surveillance of a wide range of health outcomes and their determinants, including chronic diseases, injuries and health behaviors (Halperin & Horan, 1998). National statistics on occupational injuries and illnesses have been collected largely outside of the public health infrastructure and rely almost entirely on data reported by

employers. State health agencies that have access to a wide variety of public health data systems have an important role in the surveillance of occupational diseases, injuries and hazards.

Work-related musculoskeletal disorders (MSDs) are preventable and control of occupational hazards is the most effective means of prevention. Estimating the burden and tracking these injuries helps target prevention programs and activities. Information on reported cases can be used to identify contributory factors and develop improved or new prevention strategies or regulations to protect workers.

Evidence for Rationale

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

Halperin W, Horan JM. Surveillance of injuries. Public Health Rep. 1998 Sep-Oct;113(5):424-6. [PubMed](#)

Primary Health Components

Occupational injuries; musculoskeletal disorders (MSDs)

Denominator Description

Estimated full-time equivalents (FTEs) worked for the same calendar year

Numerator Description

Estimated cases of all musculoskeletal disorders (MSDs) involving days away from work for private sector employees (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

In 2014, about one-third (n=298,460) of all lost workday cases reported by private sector employers in the United States were due to musculoskeletal disorders (MSDs). This equates to a rate of 319 musculoskeletal disorder cases per 100,000 full-time workers. Forty percent of all MSD cases involved an injury to the back and almost one third (29.8%) involved injury to the upper extremities (U.S. Bureau of Labor Statistics [BLS], 2016).

Evidence for Additional Information Supporting Need for the Measure

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

U.S. Bureau of Labor Statistics (BLS). Injuries, illnesses, and fatalities. Survey of Occupational Injuries and Illnesses (SOII): nonfatal cases involving days away from work: selected characteristics (2011 forward). [internet]. Washington (DC): U.S. Bureau of Labor Statistics; 2016.

Extent of Measure Testing

In 1998, the Council of State and Territorial Epidemiologists (CSTE), in association with the National Institute for Occupational Safety and Health (NIOSH), convened the NIOSH-States Occupational Health Surveillance Work Group to make recommendations to NIOSH concerning State-based surveillance activities for the coming decade.

The Work Group recognized the need to pilot test 19 indicators to assess the feasibility of widespread implementation and to develop specific guidance on how to compute the proposed measures. In summer 2002, the five "Core" states with NIOSH Cooperative Agreements to conduct "Core Occupational Health Surveillance" (California, Massachusetts, Michigan, New York, and Washington) agreed to pilot test the indicators and to create user-friendly "how-to" guides so that other states could calculate the indicators.

Subsequent to the initial pilot testing by the five "Core" states, eight additional states (Connecticut, Maine, Nebraska, New Jersey, New Mexico, North Carolina, Oregon and Wisconsin) pilot tested the "how-to" guides. Feedback from these additional states was incorporated into the development of the final "how-to" guides for 19 indicators in November 2004.

Procedures to review, approve, and implement new indicators were developed by the Work Group. In 2013, a fourteenth health effect indicator (*Asthma among Adults Caused or Made Worse by Work*) was developed and pilot tested. The Work Group voted to adopt this as the twenty-first indicator. In 2014, a fifteenth health effect indicator (*Work-Related Severe Traumatic Injury Hospitalizations*) was developed and pilot tested. The Work Group voted to adopt this as the twenty-second indicator.

Evidence for Extent of Measure Testing

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

National Public Health Programs

State/Provincial Public Health Programs

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

State/Provincial

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Framework for Public Health Quality

Public Health Aims for Quality

Population-centered

Risk Reducing

Transparency

Vigilant

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality

Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

The calendar year

Denominator Sampling Frame

Geographically defined

Denominator (Index) Event or Characteristic

Geographic Location

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Estimated full-time equivalents (FTEs) worked for the same calendar year

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Estimated cases of all musculoskeletal disorders (MSDs) involving days away from work for private sector employees

Note: Refer to the "How-To Guide – Indicator #7" section of the original measure documentation for instructions to calculate the estimated annual incidence rate of all MSDs involving days away from work per 100,000 full-time equivalents (FTEs).

Exclusions
Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

National public health data

State/Province public health data

Type of Health State

Adverse Health State

Instruments Used and/or Associated with the Measure

U.S. Bureau of Labor Statistics, Annual Survey of Occupational Injuries and Illnesses (SOII)

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

Other Available Data: Age, gender, race/ethnicity, occupation, industry, type of event, body part affected and nature/source of injury. Details are available only for injuries involving days away from work.

Recommendations: States can examine work-related musculoskeletal disorders (MSDs) by industry, age, gender, occupation (counts and rates) and by body part affected, and nature/source of injury/illness (counts only).

Standard of Comparison

not defined yet

Identifying Information

Original Title

7.2 Estimated annual incidence rate of all musculoskeletal disorders involving days away from work per 100,000 FTE.

Measure Collection Name

Occupational Health Indicators

Measure Set Name

Acute and Cumulative Occupational Injuries

Submitter

Council of State and Territorial Epidemiologists - Professional Association

Developer

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

Council of State and Territorial Epidemiologists - Professional Association

Funding Source(s)

Centers for Disease Control and Prevention (CDC)–National Institute for Occupational Safety and Health (NIOSH) Award 2-R01 OH010094-05: Enhancing State-Based Occupational Health Surveillance Capacity

Composition of the Group that Developed the Measure

Original Work Group Members: National Institute for Occupational Safety and Health (NIOSH)–Council of State and Territorial Epidemiologists (CSTE) Occupational Health Surveillance Work Group

Wayne Ball, Utah Department of Health

Geoffrey Calvert, NIOSH

Robert Castellan, NIOSH

Letitia Davis, Massachusetts Department of Health

Robert Harrison, California Department of Health Services

Michael Heumann, Oregon Department of Health Services

Kim Lim, Maine Department of Labor

John Myers, NIOSH

Matt London, New York State Department of Health

Latoya Osmani, CSTE

David Parker, Minnesota Department of Health

Kenneth Rosenman, Michigan State University
Robert Roscoe, NIOSH
Diana Salzman, Texas Department of Health
John Sestito, NIOSH
Catherine Thomsen, Oregon Department of Human Services
David Valiante, New Jersey Department of Health and Senior Services

Core State Members of the Occupational Health Surveillance Pilot Project

Barbara Materna, California Department of Health Services
Florence Reinisch, California Department of Health Services
Tsegaye Bekle, Massachusetts Department of Public Health
Letitia Davis, Massachusetts Department of Public Health
Rokho Kim, Massachusetts Department of Public Health
Thomas Largo, Michigan Department of Community Health
Martha Stanbury, Michigan Department of Community Health
Alicia Fletcher, New York State Department of Health
Kitty Gelberg, New York State Department of Health
Dave Bonauto, Washington State Department of Labor and Industries
Christy Curwick, Washington State Department of Labor and Industries

Current Occupational Health Indicator (OHI) and Work Group Leads

Marija Borjan, *Co-chair* (State Representative from New Jersey)
Tristan Victoroff, *Co-chair* (NIOSH Representative)
Patricia Schleiff, *Co-chair* (NIOSH Representative)
Amy Patel, *Secretary* (CSTE)
Kathleen Grattan, *OHI Lead* (State Representative from Massachusetts)

Financial Disclosures/Other Potential Conflicts of Interest

None

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2016 Mar

Measure Maintenance

Annually

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists; 2014 Mar. 116 p.

Measure Availability

Source available from the [Council of State and Territorial Epidemiologists \(CSTE\) Web site](#)

.

For more information, contact CSTE at 2872 Woodcock Boulevard, Suite 250, Atlanta, GA 30341; Phone: 770-458-3811; Fax: 770-458-8516; Web site: <https://cste.site-ym.com/> .

NQMC Status

This NQMC summary was completed by ECRI Institute on December 1, 2014. This NQMC summary was verified by the measure developer on January 23, 2015.

This NQMC summary was updated by ECRI Institute on September 17, 2015. This NQMC summary was verified by the measure developer on October 19, 2015.

Copyright Statement

No copyright restrictions apply.

Production

Source(s)

Council of State and Territorial Epidemiologists (CSTE), National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC). Occupational health indicators: a guide for tracking occupational health conditions and their determinants. Atlanta (GA): Council of State and Territorial Epidemiologists (CSTE); 2016 Mar. 145 p.

Disclaimer

NQMC Disclaimer

The National Quality Measures Clearinghouse® (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.

All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the [NQMC Inclusion Criteria](#).

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. Moreover, the views and opinions of developers or authors of measures represented on this site do not

necessarily state or reflect those of NQMC, AHRQ, or its contractor, ECRI Institute, and inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.